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O I P E JC81 AUG 10 2005 PATENT & TRADEMARK OFFICE	Application Number	09/944,230
	Filing Date	August 30, 2001
	First Named Inventor	Whitman et al.
	Group Art Unit	2826
	Examiner Name	T. Dickey
	Attorney Docket Number	2269-4294.1US (98-1208.01/US)

## ENCLOSURES (check all that apply)

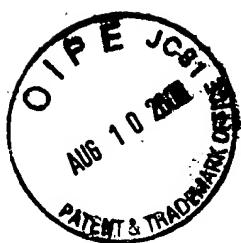
<input checked="" type="checkbox"/> Postcard receipt acknowledgment (attached to the front of this transmittal)  <input checked="" type="checkbox"/> Duplicate copy of this transmittal sheet in the event that additional filing fees are required under 37 C.F.R. § 1.16  <input type="checkbox"/> Preliminary Amendment  <input type="checkbox"/> Response to Restriction Requirement/Election of Species Requirement dated  <input type="checkbox"/> Amendment in response to office action dated  <input type="checkbox"/> Amendment under 37 C.F.R. § 1.116 in response to final office action dated  <input type="checkbox"/> Additional claims fee - Check No. in the amount of \$  <input type="checkbox"/> Letter to Chief Draftsman and copy of FIGS. with changes made in red  <input type="checkbox"/> Transmittal of Formal Drawings  <input type="checkbox"/> Formal Drawings ( sheets)	<input type="checkbox"/> Information Disclosure Statement PTO/SB/08A (08-00); <input type="checkbox"/> copy of cited references  <input type="checkbox"/> Supplemental Information Disclosure Statement; PTO/SB/08A (08-00); copy of cited references and Check No. in the amount of \$180.00  <input type="checkbox"/> Associate Power of Attorney  <input type="checkbox"/> Petition for Extension of Time and Check No. in the amount of \$  <input type="checkbox"/> Petition  <input checked="" type="checkbox"/> Reply Brief (7 pages)  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Assignment Papers (for an Application)	<input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Other Enclosure(s) (please identify below):	
		Remarks	
		<b>The Commissioner is authorized to charge any additional fees required but not submitted with any document or request requiring fee payment under 37 C.F.R. §§ 1.16 and 1.17 to Deposit Account 20-1469 during pendency of this application.</b>	

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Brick G. Power	Registration No. 38,581
Signature		
Date	August 10, 2005	

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

**In re Application of:**

Whitman et al.

**Serial No.:** 09/944,230

**Filed:** August 30, 2001

**For:** SPIN COATING FOR MAXIMUM  
FILL CHARACTERISTIC YIELDING A  
PLANARIZED THIN FILM SURFACE

**Confirmation No.:** 2488

**Examiner:** T. Dickey

**Group Art Unit:** 2826

**Attorney Docket No.:** 2269-4294.1US

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**REPLY BRIEF**

Mail Stop Appeal Brief—Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Attn: Board of Patent Appeals and Interferences

Sirs:

This Reply Brief is being submitted pursuant to 37 C.F.R. § 41.41 and within two months of the June 15, 2005, mailing date of the Examiner' Answer in the above-referenced appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The Examiner has alleged that the “SUMMARY OF CLAIMED SUBJECT MATTER” of the Appeal Brief is deficient in several respects, but never required that the Appeal Brief be revised. An updated version of the “SUMMARY OF CLAIMED SUBJECT MATTER” that addresses the purported deficiencies, follows.

The claims of the ‘230 Application are drawn to semiconductor device structures with material layers that at least partially fill recesses within the substrates of the semiconductor device structures and that are substantially free of hills and valleys. *See* independent claims 1 and 15; *see also*, e.g., paragraphs [0015], [0046], [0053]. More specifically, the material layer of the semiconductor device structure recited in independent claim 1 *substantially fills* at least one recess in the substrate (*see, e.g.*, Fig. 12; paragraph [0053]), while the material layer of the semiconductor device structure of independent claim 15 *at least partially fills* at least one recess in the substrate (*see, e.g.*, Fig. 13; paragraph [0055]). The surfaces of these material layers may be free of abrasive planarization-induced defects (*see* claims 21 and 23; *see also* paragraph [0042]), indicating that the substantial lack of hills or valleys in these surfaces may be achieved by means other than mechanical planarization or chemical-mechanical planarization techniques.

VIII. ARGUMENT

A. REJECTIONS UNDER 35 U.S.C. § 102

Each of claims 1, 3, 11-13, and 15-24 stands rejected under 35 U.S.C. § 102(e).

1. LEGAL AUTHORITY

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference which qualifies as prior art under 35 U.S.C. § 102. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

M.P.E.P. § 2125 cautions that “drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art.” This rule is based, at least in part, upon the holding in *In re Aslanian*, 200 USPQ 500 (C.C.P.A. 1979), in which the court directed “[w]e evaluate and apply the teachings of all relevant references on the basis of what they reasonably disclose and suggested to one skilled in the art . . .” In *Aslanian*, the court was evaluating the relevance of drawings of a design patent as prior art to the claims of a utility patent application. Relative dimensions were not at issue. Therefore, it is apparent that reference to relative dimensions of features of an illustrated object in M.P.E.P. § 2125 is merely an example of something that may not be reasonably disclosed or suggested to one of ordinary skill in the art.

The C.C.P.A., in *In re Olson*, 101 USPQ 401 (1954), recognized that, unless expressly indicated, “drawings which accompany an application for a patent are merely illustrative of the principles embodied in the alleged invention claimed therein . . .” M.P.E.P. § 2125 provides further guidance on this principle by stating that illustrated drawing features are of little value in supporting a claim rejection when the specification does not indicate that the drawings may be relied upon for such a purpose.

3. ANALYSIS

It is readily apparent, from the assertions that have been made in the Examiner's Answer, that the Examiner has expended a significant effort on attempting to define "substantially planar." Unfortunately, the phrase that the Examiner has attempted to define does not appear in either independent claim 1 or independent claim 15. Instead, these claims are directed to structures with materials having surfaces that are "substantially free of hills and valleys." This element of independent claims 1 and 15 is neither expressly nor inherently described in Yates, Kikuchi, or Wang.

The Examiner's rejections of the claims based on the disclosures of Yates and Kikuchi are based almost completely upon the drawings of these references. The Examiner questions the law with respect to his reliance upon the drawings by stating, at page 8 of the Examiner's Answer, that "Applicant does not cite authority for his view that everything in the drawings must be viewed with dark suspicion."

While it is acknowledged that partial reliance upon drawings would not ordinarily demand such suspicion, the Examiner has relied primarily, if not completely, upon the subject matter shown in the drawings of Yates and Kikuchi. In view of the Examiner's unusually heavy reliance upon the drawings, and the clear guidance provided by the law that the written description should be relied upon in interpreting what the drawings "reasonably disclose and suggest to one of ordinary skill in the art," it is evident that the Examiner's rejections should receive an equal share of scrutiny.

The Examiner's argument that his drawing-based rejections should receive very little scrutiny is based upon law that has nothing to do with anticipation under 35 U.S.C. § 102 or

obviousness under 35 U.S.C. § 103(a). Specifically, the Examiner has relied upon *Vas-Cath, Inc., v. Mahurkar*, 19 USPQ2d 1111 (Fed. Cir. 1991) and *Enzo Biochem, Inc. v. Gen-Probe, Inc.*, 323 F.3d 956, 968; 63 USPQ2d 1609,1616 (Fed. Cir. 2002). Both of these cases deal with the written description requirement of 35 U.S.C. § 112, first paragraph. While *Vas-Cath* discusses whether or drawings may meet the written description requirement, drawings were not even at issue in *Enzo Biochem*. Thus, neither of these cases can be relied upon in determining the amount of weight that should be afforded to drawings that are relied upon in rejecting claims under 35 U.S.C. § 102 or 103(a).

That being said, for the reasons provided in the Appeal Brief and throughout prosecution of the above-referenced application, the specifications of Yates and Kikuchi do not support the notion that the structures illustrated in the drawings of these references include material layers with surfaces that are “substantially free of hills and valleys.”

As for Wang, it clearly describes a structure that includes a material layer having a surface that includes valleys. Col. 6, lines 32-34. Therefore, even if that surface lacks “hills,” it cannot be substantially free of “valleys” and, thus, does not anticipate each and every element of either independent claim 1 or independent claim 15.

For these reasons, as well as the additional reasons provided in the Appeal Brief, it is respectfully submitted that the subject matter recited in independent claims 1 and 15, as well as that to which dependent claims 3, 11-13, and 16-24 are directed, is, under 35 U.S.C. § 102, allowable over the disclosures of the cited references.

Accordingly, it is respectfully requested that that 35 U.S.C. § 102 rejections of claims 1, 3, 11-13, and 15-24 be withdrawn and that each of these claims be allowed.

XI. CONCLUSION

It is respectfully submitted that:

- (A) Claims 15-20, 23, and 24 recite subject matter that, under 35 U.S.C. § 102(e), is allowable over the subject matter disclosed in Yates;
- (B) Under 35 U.S.C. § 102(e), the subject matter to which claims 1, 3, 11-13, 21, and 22 are drawn is allowable over the subject matter described in Kikuchi;
- (C) Claims 1, 15, 16, and 21-24 are directed to subject matter that, under 35 U.S.C. § 102(e), is allowable over the disclosure of Wang;
- (D) Claim 4 is allowable under 35 U.S.C. § 103(a) for being directed to subject matter which is patentable over teachings from Kikuchi, in view of the subject matter taught in Dennison; and
- (E) In view of the allowability of claims 1, 3, 4, and 15-20, which remain generic to all of the species of invention that have been identified by the Examiner, claims 2 and 5-10 should be returned to consideration and allowed, as required by M.P.E.P. § 806.04(d).

In view of the foregoing, the rejections of claims 1, 3, 4, and 11-24 should be reversed, claims 2 and 5-10 should be returned to consideration, and each of these claims should be allowed.

Respectfully submitted,



Brick G. Power  
Registration No. 38,581  
Attorney for Applicant(s)  
TRASKBRITT  
P.O. Box 2550  
Salt Lake City, Utah 84110-2550  
Telephone: 801-532-1922

Date: August 10, 2005

BGP/eg

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